

IN THE DRAWINGS

As required by the Examiner, Figures 2A, 5, and 11 have been corrected in the marked-up version thereof attached to the Request For Approval of Drawing Changes filed herewith. A comparison, for example, of Figures 2A and 2B shows that the square now surrounding R and G1 depicts the inner border of the region 13, and the space between that square and the R and G1 portions is the element 14. Figure 11 has been marked-up to designate it as "Prior Art"

Also, Figure 7B has been amended to show the doped region 13 as "p⁺" to bring that depiction into conformance with the other drawings.

IN THE CLAIMS

All of the pending claims are set forth here, regardless of whether they have been amended. For convenience, attached hereto is a marked-up copy of the amended claims indicating the changes made thereto.

Please cancel Claims 13-15, ~~23-25~~, and 29. Please amend Claims 1, 11 and 21 as follows:

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1. (Amended) A solid-state imaging device having a first color picture cell array which contains picture cells having a photo-electric converting element for converting incident light to electric signals arranged two-dimensionally, and a second color picture cell array which contains picture cells having a photo-electric converting element for converting incident light to electric signals arranged two-dimensionally, placed in juxtaposition, on a substrate, wherein said substrate is formed from a material having a first

conductivity type and is provided with a common well formed from a material of conductivity type opposite to the substrate, said common well being common to the first color picture cell array and the second color picture cell array and having a doped region therein of the same conductivity type as said common well.

2. The solid-state imaging device according to claim 1, wherein a well-wiring and a well-contact are provided between the first color picture cell array and the second color picture cell array.

3. The solid-state imaging device according to claim 1, wherein an element isolation region is provided between the first color picture cell array and the second color picture cell array.

4. The solid-state imaging device according to claim 1, wherein a light-intercepting member is provided between the first color picture cell array and the second color picture cell array.

5. The solid-state imaging device according to claim 1, wherein the photo-electric converting element is a photodiode, the picture cell has plural transistors of an insulating gate type, the common well provides a first conductivity type semiconductor region for an anode or a cathode of the photodiode, and each first conductivity type well for the plural insulating gate type transistors.

6. The solid-state imaging device according to claim 1, wherein the photo-electric converting element is a photodiode, and the common well provides a first conductivity type semiconductor region for an anode or a cathode of the photodiode, and a well for formation of a charge transfer channel of CCD.

7. The solid-state imaging device according to claim 1, wherein a third color picture cell array is additionally provided so as to have said common well which array contains picture cells having a photo-electric converting element for converting incident light to electric signals arranged two-dimensionally.

8. The solid-state imaging device according to claim 1, wherein the color picture cell arrays have respective common color filters on the photo-electric converting elements.

9. The solid-state imaging device according to claim 8, wherein the common color filter is a color filter of red, green, or blue.

10. The solid-state imaging device according to claim 1, which has a terminal for connection with a power source for supplying a voltage for generating a reference voltage for the common well from an outside of the solid-state imaging device.

a' 11. (Amended) A solid-state imaging device having a first color picture cell array which contains picture cells having a photo-electric converting element for converting incident light to electric signals arranged two-dimensionally, and a second color picture cell array which contains picture cells having a photo-electric converting element for converting incident light to electric signals arranged two-dimensionally, placed in juxtaposition on a substrate, wherein said solid-state imaging device has between the first color picture cell array and the second color picture cell array a well-contact and a well-wiring for applying a reference voltage to a common well common to the first color picture cell array and the second color picture cell array, and wherein said substrate is formed from a material having a first conductivity type and has said common well formed therein from a material having the opposite conductivity type to said substrate, said common well having a doped region therein of the same conductivity as the common well.

12. The solid-state imaging device according to claim 11, wherein the well-wiring is formed from a light-intercepting material to intercept the incident light upon the common well region between the first color picture cell array and the second color picture cell array.

16. The solid-state imaging device according to claim 11, wherein a plurality of the well-contacts are formed between the first color picture cell array and the second color picture cell array.

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17. The solid-state imaging device according to claim 11, wherein the photo-electric converting element is a photodiode, the picture cell has plural transistors of an insulating gate type, the common well provides a first conductivity type semiconductor region for an anode or a cathode of the photodiode, and each first conductivity type well for the plural insulating gate type transistors.

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18. The solid-state imaging device according to claim 11, wherein the photo-electric converting element is a photodiode, and the common well provides a first conductivity type semiconductor region for an anode or a cathode of the photodiode, and a well for formation of a charge transfer channel of CCD.

19. The solid-state imaging device according to claim 11, wherein a third color picture cell array is additionally provided which array contains picture cells having a photo-electric converting element for converting incident light to electric signals arranged two-dimensionally.

20. The solid-state imaging device according to claim 11, wherein the color picture cell arrays have respective common color filters on the photo-electric converting elements.

21. (Amended) A solid-state imaging device having a first color picture cell array which contains picture cells having a photo-electric converting element for

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converting incident light to electric signals arranged two-dimensionally, a second and third picture cell arrays which respectively contain picture cells having a photo-electric converting element for converting incident light to electric signals arranged two-dimensionally, and a fourth color picture cell array which contains picture cells having a photo-electric converting element for converting incident light to electric signals arranged two-dimensionally, placed in juxtaposition on a substrate,

wherein the first color picture cell array and the fourth color picture cell array are placed in a diagonal relation, and the second color picture cell array and the third color picture cell array are placed in another diagonal relation; and

said solid-state imaging device has between the first color picture cell array and the second color picture cell array a well-contact and a well-wiring for applying a reference voltage to a common well common to at least the first color picture cell array and the second color picture cell array, and wherein said substrate is formed from a material having a first conductivity type and has said common well formed therein from a material having the opposite conductivity type to said substrate, said common well having a doped region therein of the same conductivity as the common well.

22. The solid-state imaging device according to claim 21, wherein the well-wiring is formed from a light-intercepting material to intercept the incident light upon the common well region between the first color picture cell array and the second color picture cell array.

26. The solid-state imaging device according to claim 21, wherein a plurality of the well-contacts are formed between the first color picture cell array and the second color picture cell array.

27. The solid-state imaging device according to claim 21, wherein the photo-electric converting element is a photodiode, the picture cell has plural transistors of an insulating gate type, the common well provides a first conductivity type semiconductor region for an anode or a cathode of the photodiode, and each first conductivity type well for the plural insulating gate type transistors.

28. The solid-state imaging device according to claim 21, wherein the photo-electric converting element is a photodiode, and the common well provides a first conductivity type semiconductor region for an anode or a cathode of the photodiode, and a well for formation of a charge transfer channel of CCD.

30. The solid-state imaging device according to claim 21, wherein the color picture cell arrays have respective common color filters on the photo-electric converting elements.

31. The solid-state imaging device according to claim 21, wherein said solid-state imaging device has between the third color picture cell array and the fourth color picture cell array a well-contact and a well-wiring for applying a reference voltage to

a common well common to at least the third color picture cell array and the fourth color picture cell array.

32. The solid-state imaging device according to claim 21, wherein the common well is common to all of the first to fourth picture cell arrays.

33. The solid-state imaging device according to claim 21, wherein the well-contact and the well-wiring for applying the reference voltage to the common well are not formed between the first color picture cell array and the third color picture cell array.

34. The solid-state imaging device according to claim 21, wherein the first color picture cell array has a color filter of one color of red and blue, the second and the third color picture cell arrays have green filters respectively, and the fourth color picture cell array has a color filter of the other color of red and blue.

35. An imaging device for imaging an object, comprising a solid-state imaging device set forth in claim 1, and a power source for supplying a voltage for generating a reference voltage for the well-wiring of the solid-state imaging device from an outside of the solid-state imaging device.

36. An imaging device for imaging an object, comprising a solid-state imaging device set forth in claim 1, and a focusing lens for focusing an image of an object on the color picture cell arrays.

37. An imaging device for imaging an object, comprising a solid-state imaging device set forth in claim 11, and a power source for supplying a voltage for generating a reference voltage for the well wiring of the solid-state imaging device from an outside of the solid-state imaging device.

38. An imaging device for imaging an object, comprising a solid-state imaging device set forth in claim 11, and a focusing lens for focusing an image of an object on the color picture cell arrays.

39. An imaging device for imaging an object, comprising a solid-state imaging device set forth in claim 21, and a power source for supplying a voltage for generating a reference voltage for the well wiring of the solid-state imaging device from an outside of the solid-state imaging device.

40. An imaging device for imaging an object, comprising a solid-state imaging device set forth in claim 21, and a focusing lens for focusing an image of an object on the color picture cell arrays.